District 11
Mobility Performance Report
2012

I-5/SR-54 Connector, San Diego. Photo by Caltrans

California Department of Transportation
Division of Traffic of Operations
Office of Performance

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1. SUMMARY ANALYSIS

Caltrans' District 11 consists of *Imperial and San Diego Counties. The population for the year 2012 totaled 3,330,239, an increase of 0.7 percent from the previous year. This number represented a total of 8.8 percent of the total state population. In 2012, District 11's automated vehicle detectors identified a total of 12.1 billion vehicle miles of travel (VMT), an increase of 5.5 percent from 2011 or 632.6 million VMT. The detectors also identified August as the peak travel month for both 2011 and 2012 with 1.2 billion VMT for 2012. Similar to the annual VMT increase, the peak month VMT increased by 13.9 percent. Possible reasons for this increase in VMT in San Diego could include stable gas prices, completion of construction projects, and fewer incidents. In 2012, District 11 identified 5.5 million Vehicle Hours of Delay (VHD) at 35 mph, an increase of 10.9 percent from the previous year. District 11 contributed 5.8 percent of the total state VHD at 35, an increase of 0.1 percent from the previous year. The average non-holiday weekday VHD at 35 was 20,373 hours for District 11, an increase of 9.6 percent from the previous year. For less severe congestion, VHD at 60, District 11 identified 13 million VHD at 60, an increase of 14.2 percent from the previous year. District 11 contributed 5.9 percent of total state VHD at 60. District 11 identified 46,510 VHD at 60 on the average non-holiday weekday, an increase of 11.8 percent from the previous year. Friday was the most congested day of the week VHD at 60 with a total of 52,057 hours, an increase of 15 percent from the previous year. The highest absolute change in delay days were identified as Fridays, with 6,789 VHD at 60. The highest percentage change in delay days were identified as Sunday/Holiday with 3,142 VHD60, an increase of 46 percent from the previous year. The congestion and A VHD increases for District 11 could be partially attributed to new construction projects and population growth.

In 2012, District 11 maintained and operated 2,058 directional mainline miles of detection. Of the total, 550 miles were directional mainline miles with detection. The number of detectors for 2012 was 3,852, an increase of 2 percent from the previous year. The increase in detection for District 11 can be attributed to the addition of freeway lanes and new detector deployments where the detection did not exist. Of those detectors, 84 percent operated in good condition, a decrease of 2.1 percent from the previous year.

**Imperial County is excluded from our analysis due to insufficient detection*

2. DESCRIPTIVE STATISTICS

District Headquarters: San Diego
Counties: San Diego, Imperial
Counties without Detection: Imperial
Population: 3,330,239; 0.7% increase over 2011
Population as a Percentage of Statewide: 9%

Table 1. POPULATION ESTIMATES AND ABSOLUTE AND PERCENT CHANGE, 2011-2012

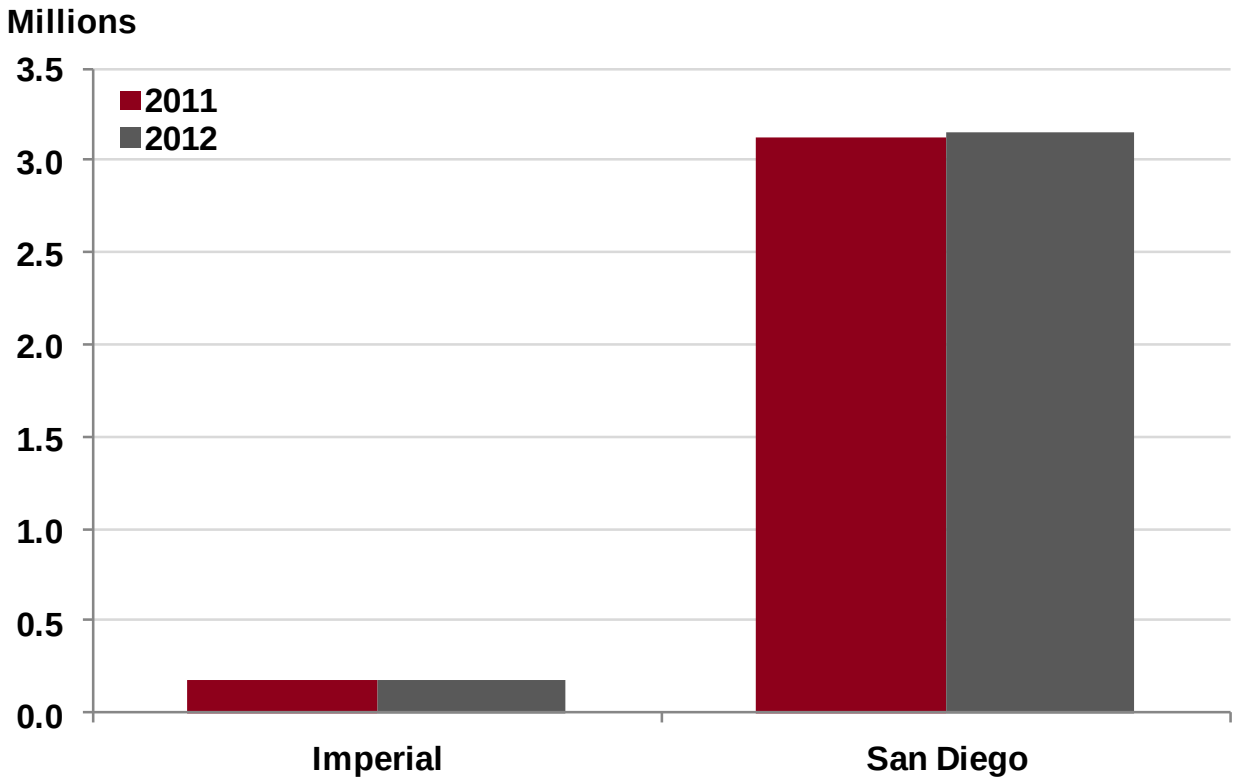
County	2011 Population	2012 Population	Difference (2012 - 2011) Absolute	Difference (2012 - 2011) Percent
Imperial	179,138	180,061	923	0.5%
San Diego	3,128,734	3,150,178	21,444	0.7%
Total	**3,307,872**	**3,330,239**	**22,367**	**0.7%**

Imperial County does not participate in mobility performance reporting.
Source: State of California, Department of Finance, *E-1 Population Estimates for Cities, Counties, and the State—January 1, 2012 and 2013*. Sacramento, California, May 2013.

Numbers may not sum to total due to rounding

FIGURE 1

POPULATION, BY COUNTY, 2011-2012



Employment, 2012 Monthly Average: 1,512,492
Unemployment Rate, 2012 Monthly Average: 9.8%, 1.1% decrease over 2011

Table 2. UNEMPLOYMENT, AND PERCENT CHANGE, BY COUNTY, 2011-2012

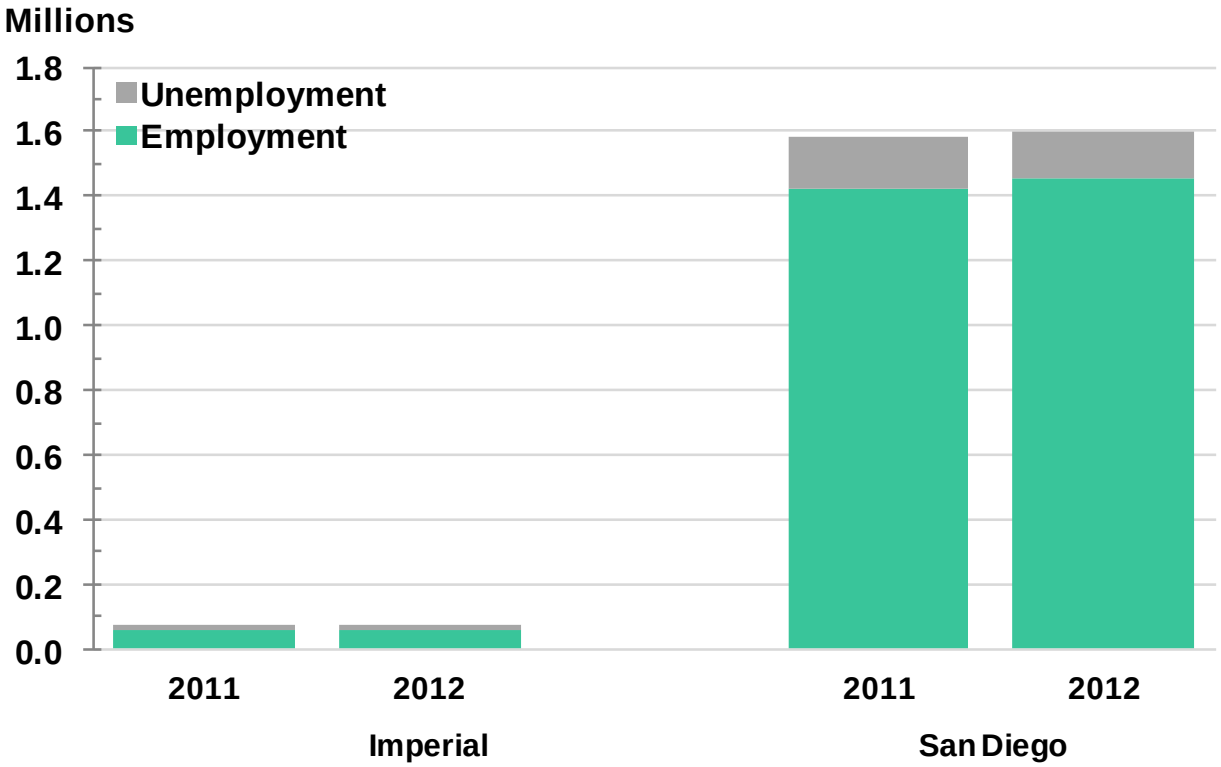
County	Unemployment Rate, 2011	Unemployment Rate, 2012	Percent Change in Rate of Unemployment (2012 - 2011)
Imperial	29.7%	28.3%	-1.4%
San Diego	10.0%	8.9%	-1.1%
District Total	**11.0%**	**9.8%**	**-1.1%**

Imperial County does not participate in mobility performance reporting.
Data not seasonally adjusted.
Source: State of California, Employment Development Department (EDD), Labor Market Information Division; data downloaded September 9, 2013.

Numbers may not sum to total due to rounding

FIGURE 2

EMPLOYMENT AND UNEMPLOYMENT, BY COUNTY, 2011-2012



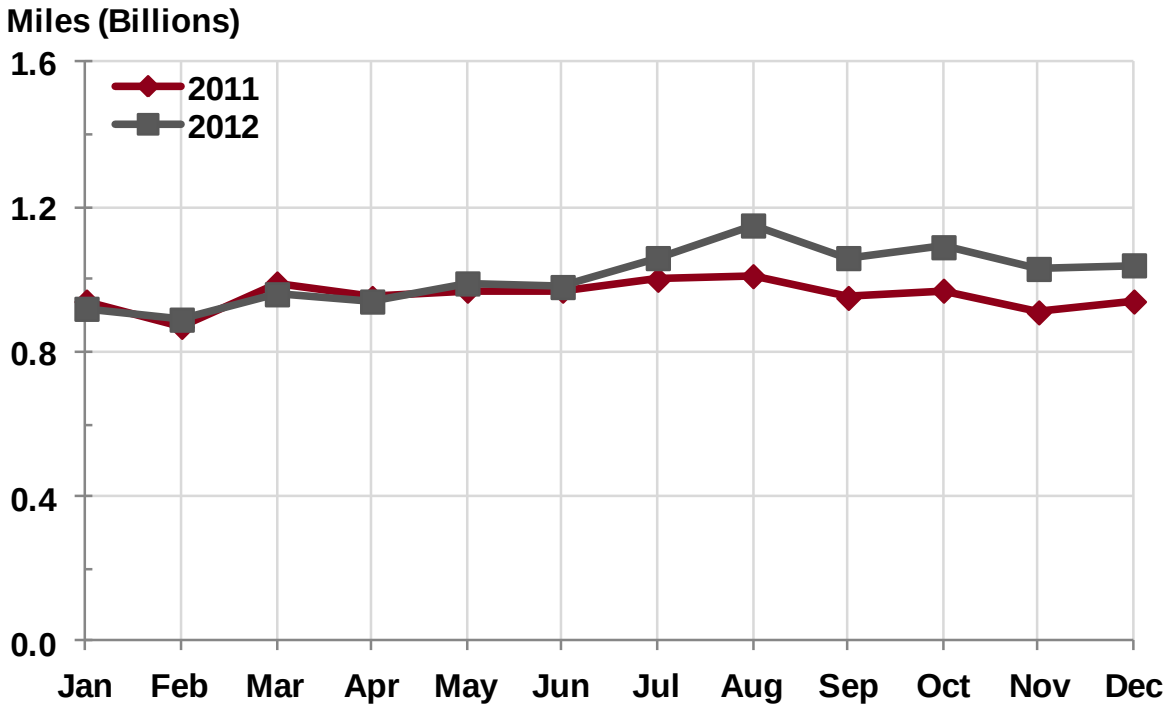
3. TRAVEL DEMAND

Vehicle Miles of Travel, 2012: 12.1 billion miles
Absolute and Percentage Change over 2011: 632.6 million VMT increase, 5.5% increase over 2011
Peak Travel Month, Percentage Change over 2011: August, 1.2 billion miles, 13.9% increase over 2011

Monthly Trend

FIGURE 3 (A)

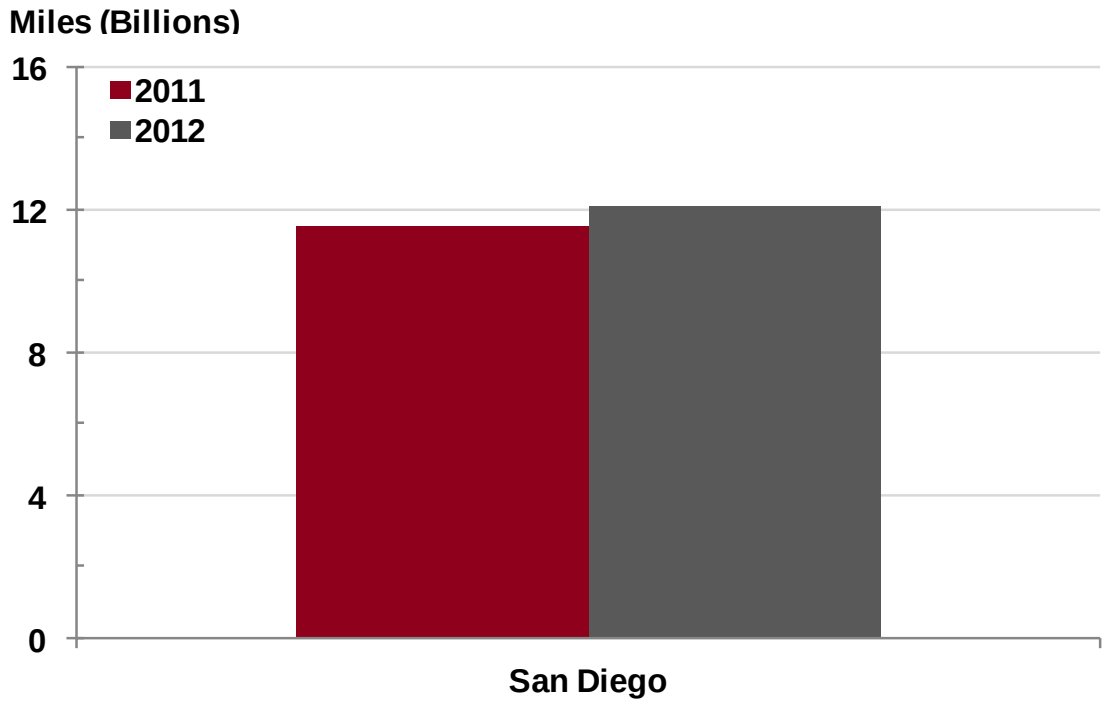
TOTAL VEHICLE MILES OF TRAVEL, BY MONTH, 2011-2012



County Trend

FIGURE 3 (B)

TOTAL VEHICLE MILES OF TRAVEL, BY COUNTY, 2011-2012



4. TRAFFIC CONGESTION

4.1. Total and Average Vehicle Hours of Delay at 35 and 60 Miles per Hour

4.1.1 Delay at 35 Miles per Hour

Vehicle Hours of Delay, 35 mph: 5.5 million hours, 10.9% increase over 2011
Average Non-Holiday Weekday Delay, 35 mph: 20,373 hours, 9.6% increase over 2011
Percentage of Statewide VHD at 35mph: 5.8%, 0.1% increase over 2011

FIGURE 4

TOTAL VEHICLE HOURS OF DELAY AT 35 MILES PER HOUR, BY MONTH, 2011-2012

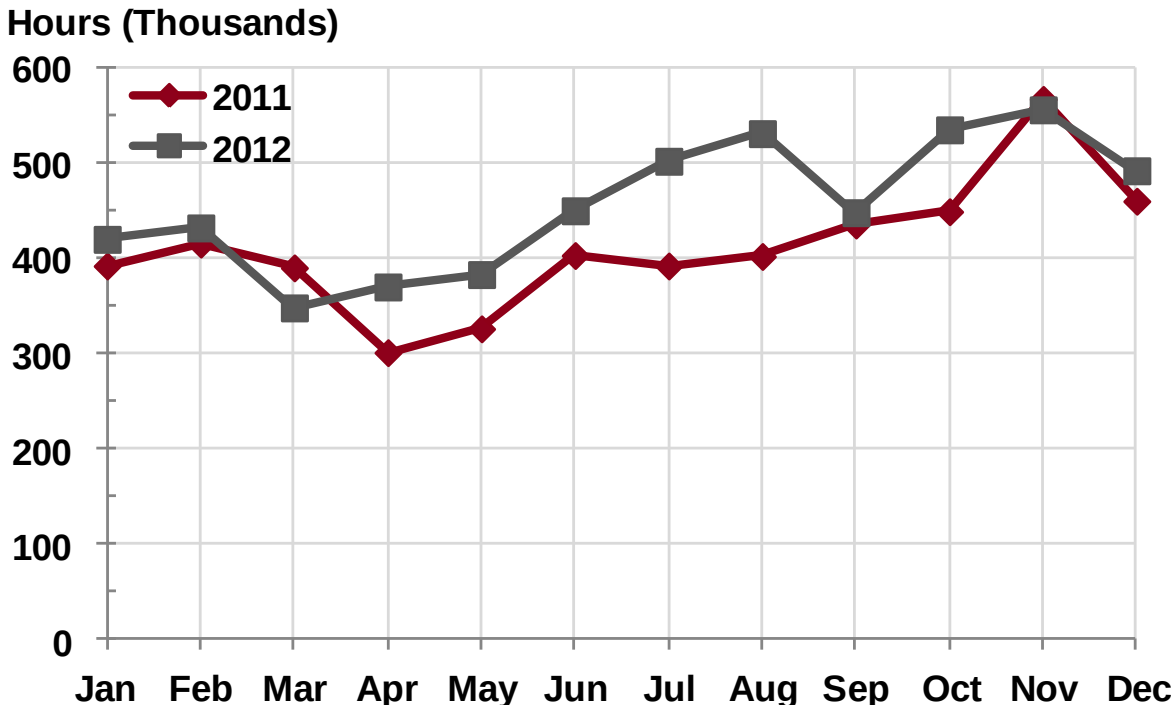
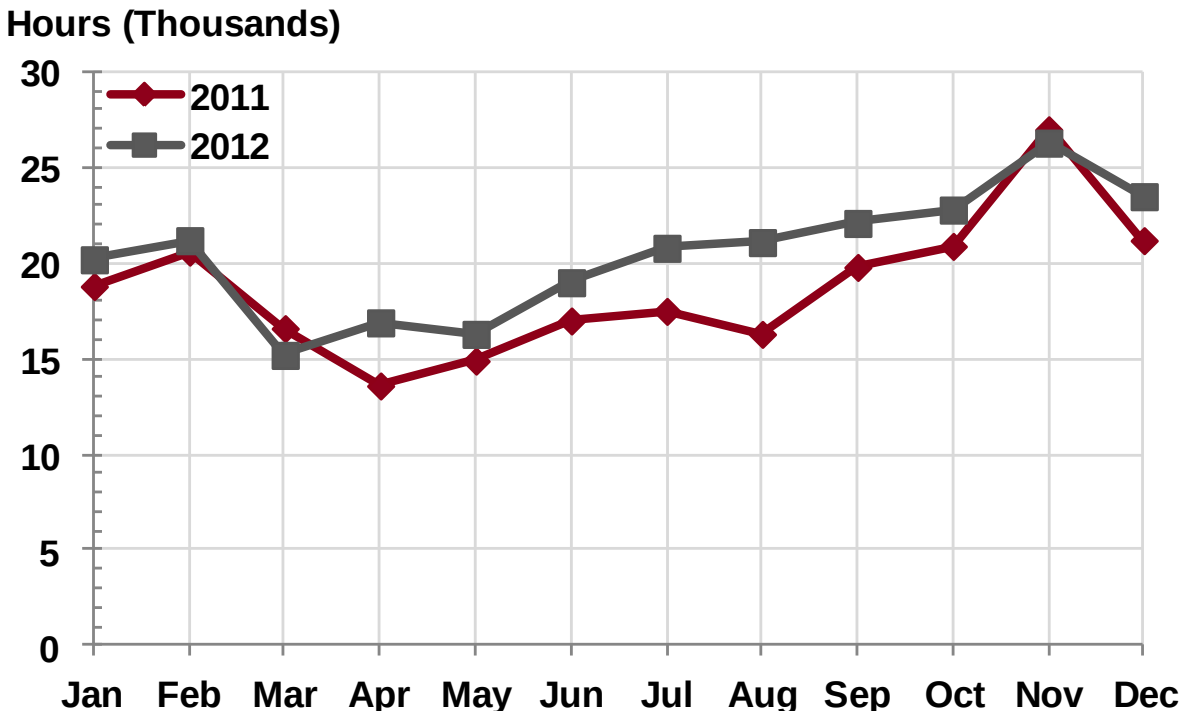


FIGURE 5

AVERAGE NON-HOLIDAY WEEKDAY VEHICLE HOURS OF DELAY AT 35 MILES PER HOUR, BY MONTH, 2011-2012



4.1.2 Delay at 60 Miles per Hour

Vehicle Hours of Delay, 60 mph:	13 million hours, 14.2% increase over 2011
Average Non-Holiday Weekday Delay, 60 mph:	46,510 hours, 11.8% increase over 2011
Percentage of Statewide VHD at 60 mph:	5.9%, 0.3% increase over 2011

FIGURE 6

TOTAL VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY MONTH, 2011-2012

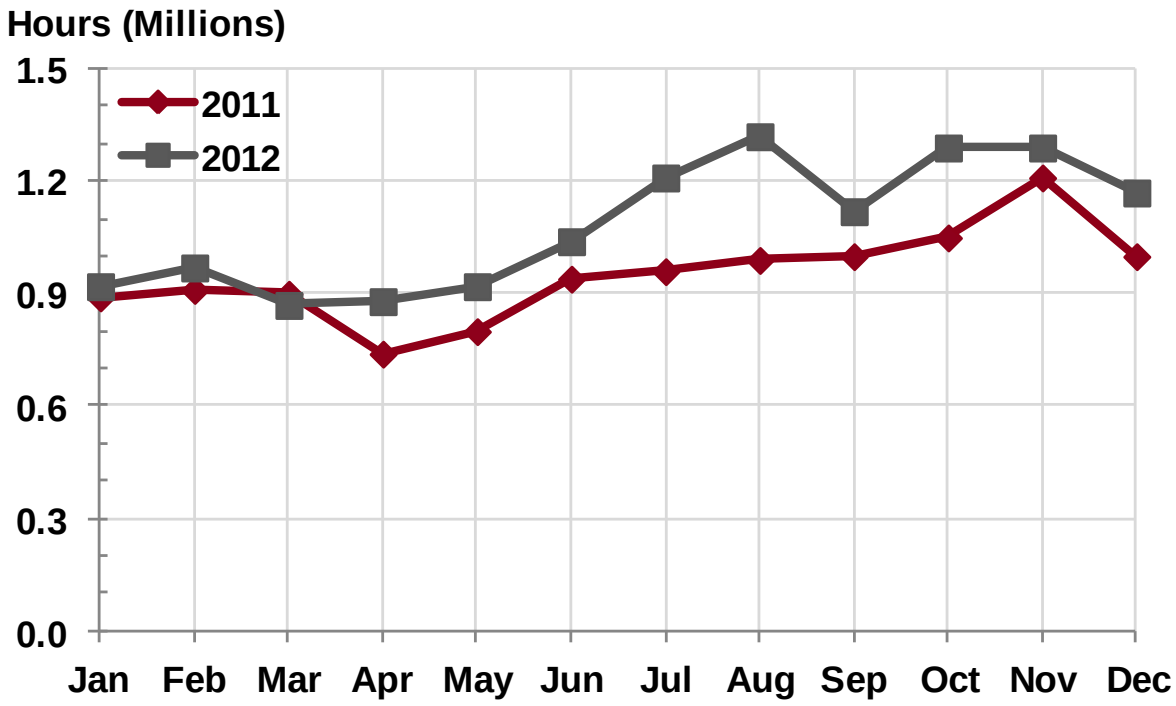
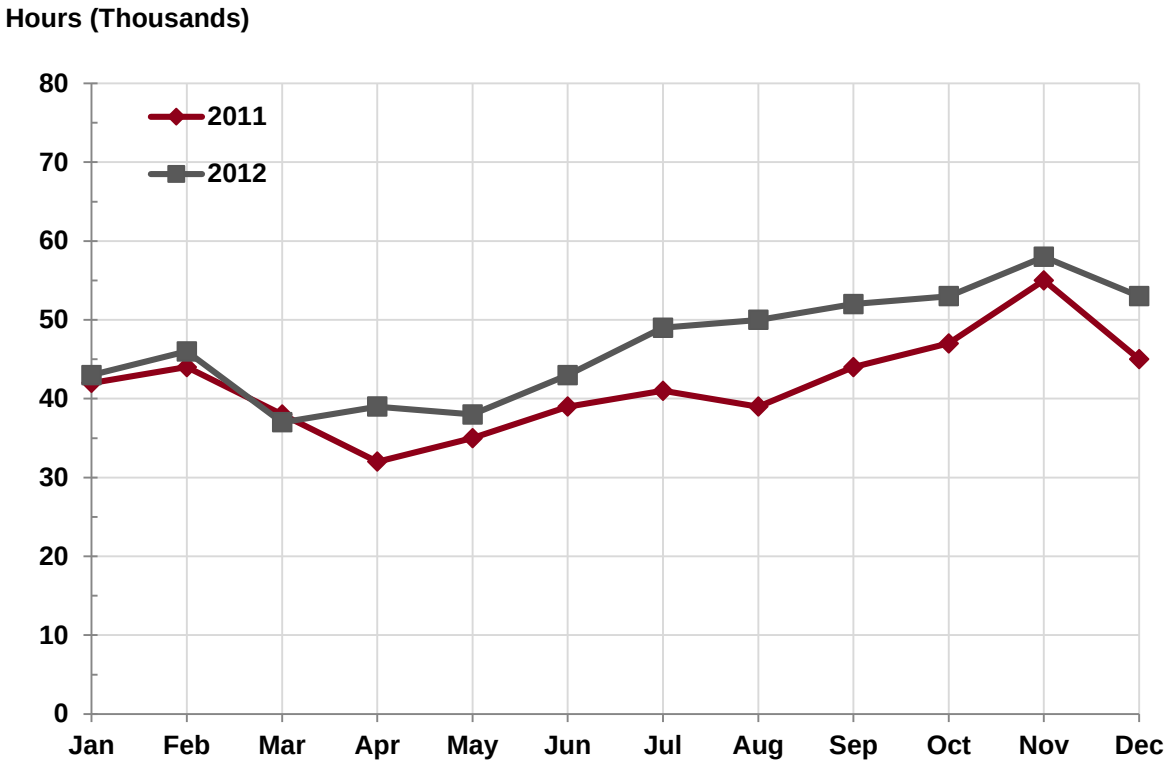


FIGURE 7

AVERAGE NON-HOLIDAY WEEKDAY VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY MONTH, 2011-2012



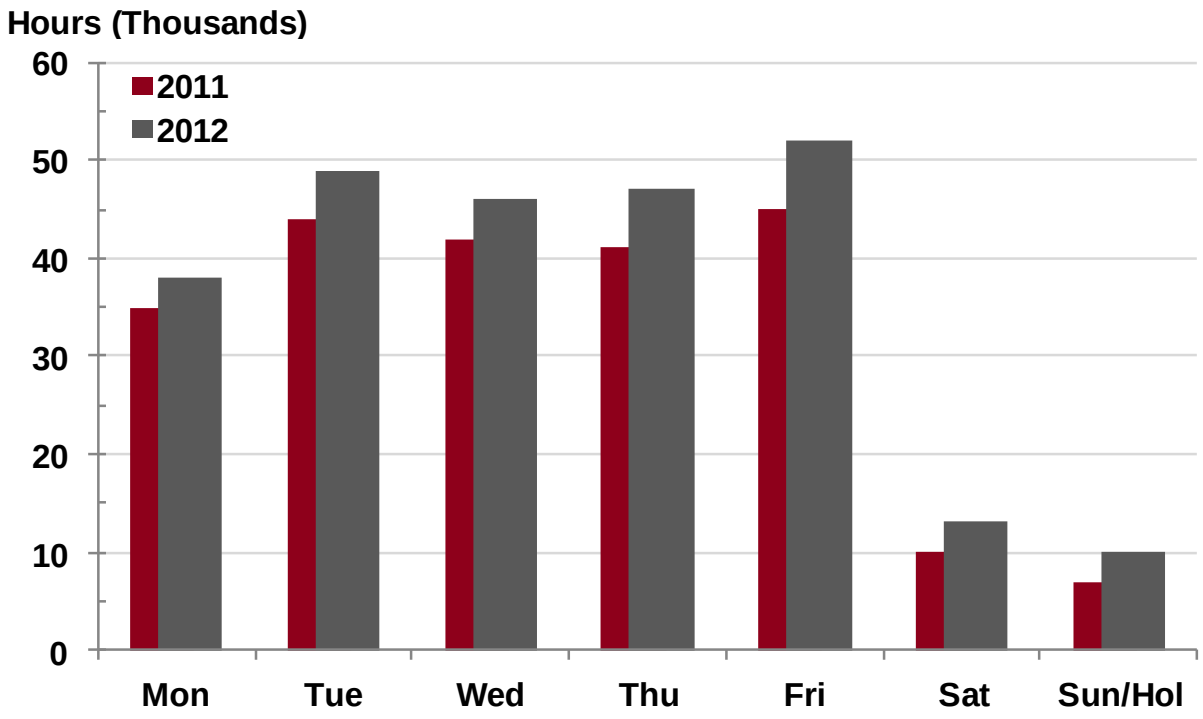
4.2. Average Vehicle Hours of Delay by Day of Week

Most Congested Day of the Week, 60 mph:	Friday, 52,057 hours, 15% increase over 2011
Highest Absolute Change in Delay, 60 mph:	Friday, 6,789 VHD increase, 15% increase over 2011
Highest Percentage Change in Delay:	Sunday/Holiday, 3,142 VHD increase, 46% increase over 2011

Delay at 60 miles per hour

FIGURE 8

AVERAGE VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY DAY OF WEEK, 2011-2012



4.3. Average Vehicle Hours of Delay by Hour of Day

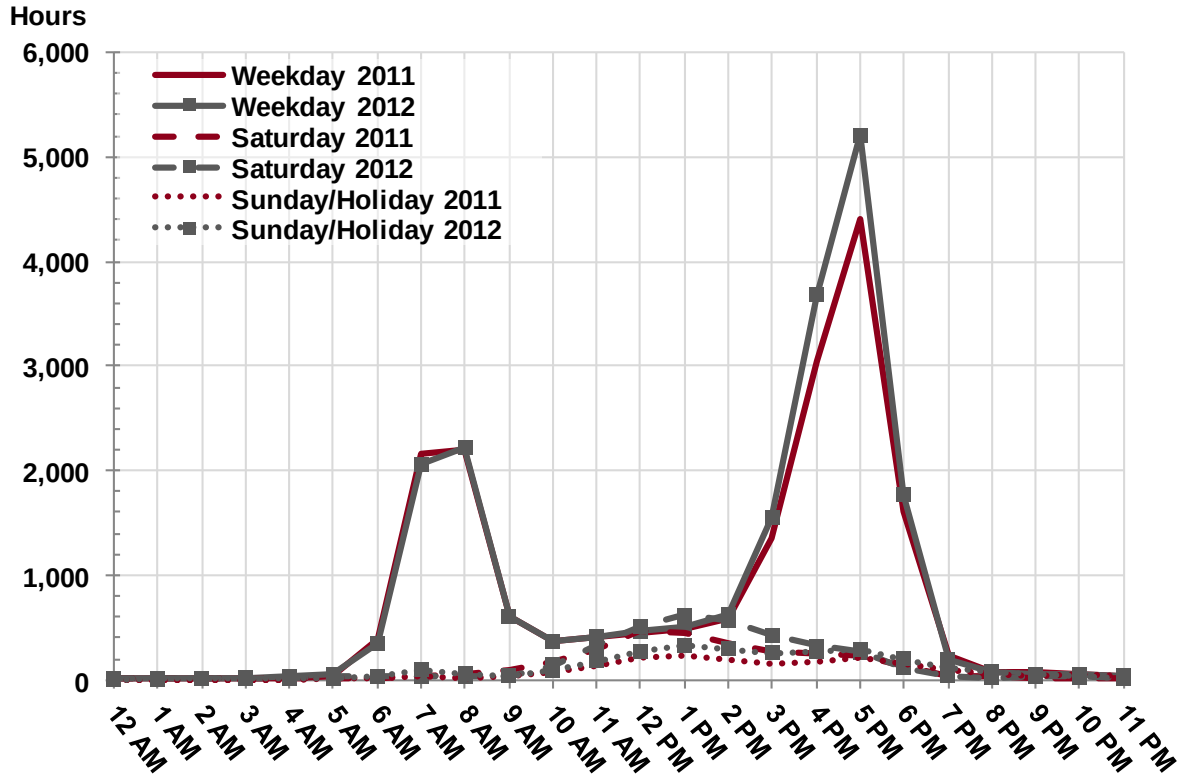
4.3.1 Delay at 35 Miles per Hour

Weekday PM Peak Hour, 35 mph: 5 PM, 5,204 hours, 18% increase over 2011
Weekday AM Peak Hour, 35 mph: 8 AM, 2,222 hours, 1% increase over 2011
Saturday Peak Hour, 35 mph: 1 PM, 618 hours, 36% increase over 2011
Sunday/Holiday Peak Hour, 35 mph: 1 PM, 330 hours, 45% increase over 2011

Delay at 35 miles per hour

FIGURE 9

AVERAGE VEHICLE HOURS OF DELAY AT 35 MILES PER HOUR, BY HOUR OF DAY, 2011-2012



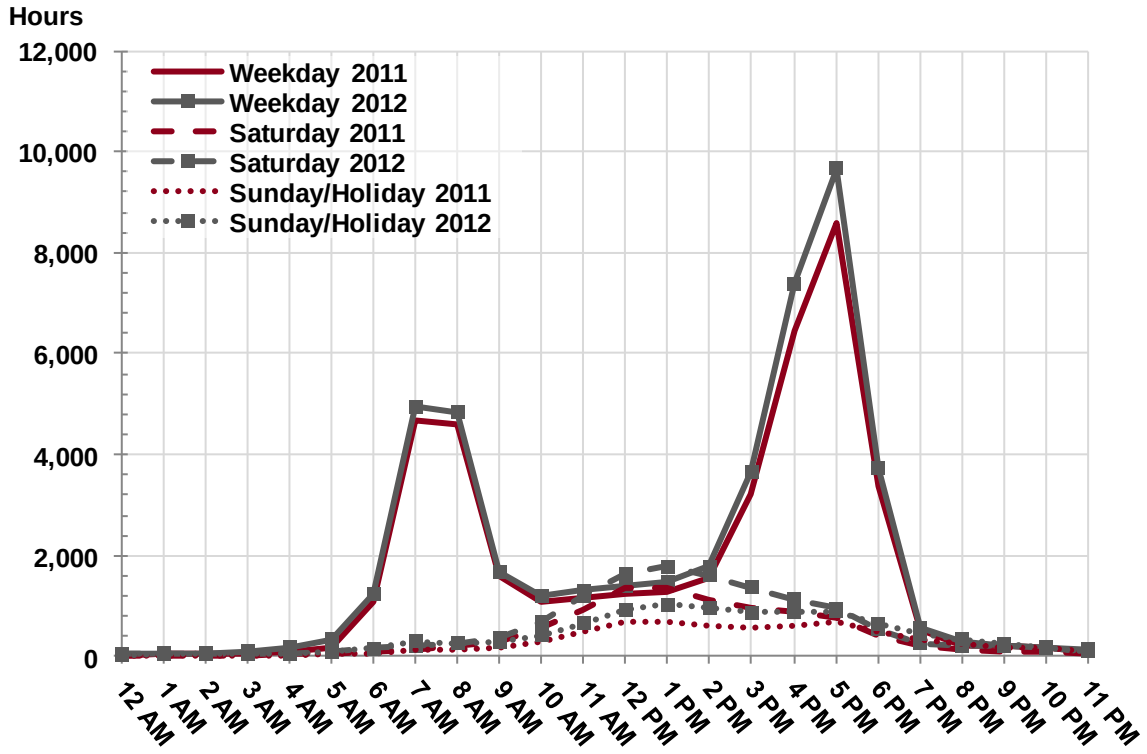
4.3.2 Delay at 60 Miles per Hour

Weekday PM Peak Hour, 60 mph: 5 PM, 9,670 hours, 12% increase over 2011
Weekday AM Peak Hour, 60 mph: 7 AM, 4,942 hours, 6% increase over 2011
Saturday Peak Hour, 60 mph: 1 PM, 1,778 hours, 31% increase over 2011
Sunday/Holiday Peak Hour, 60 mph: 1 PM, 1,026 hours, 47% increase over 2011

Delay at 60 miles per hour

FIGURE 10

AVERAGE VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY HOUR OF DAY, 2011-2012



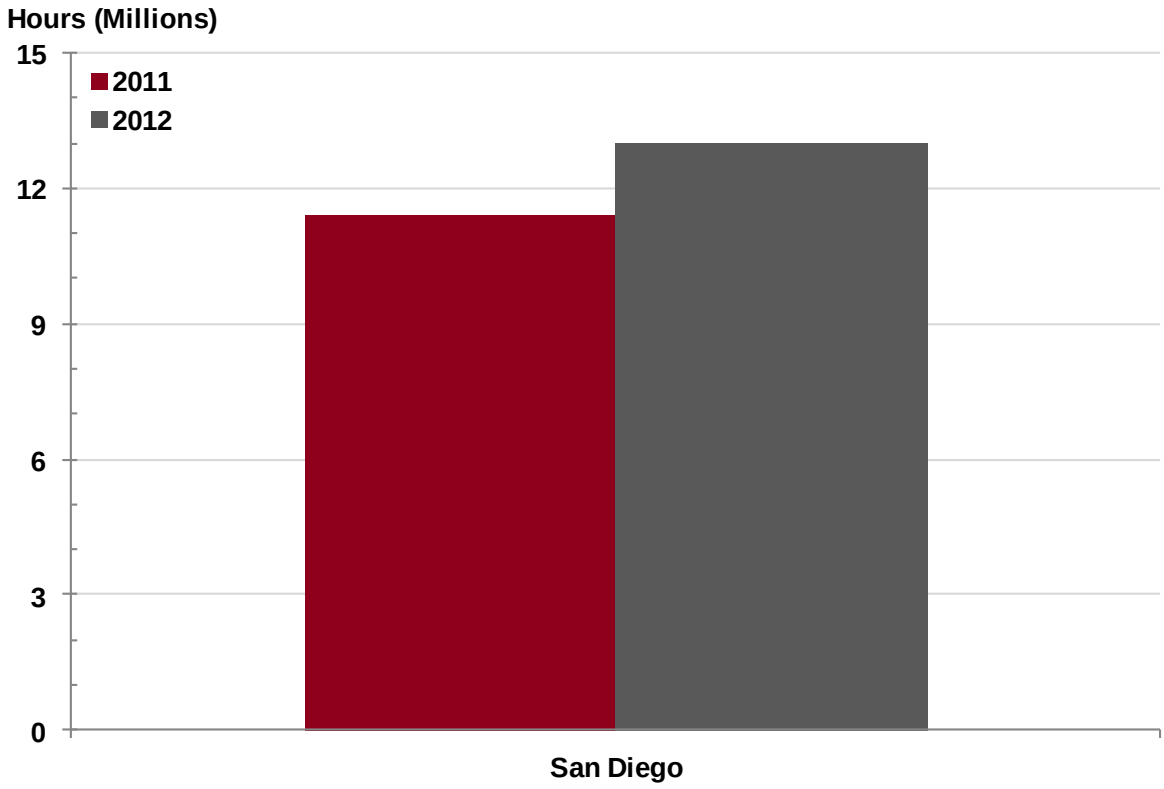
4.4. Total Vehicle Hours of Delay by County

County with Largest Delay, 60 mph:	San Diego, 13 million hours, 14.2% increase over 2011 VHD, 100% of District total VHD
County with Largest Increase in Delay, 60 mph:	San Diego, 1.6 million hours, 14.2% increase over 2011

Delay at 60 miles per hour

FIGURE 11

TOTAL ANNUAL VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY COUNTY, 2011-2012



4.5. Lost Productivity

AM Peak: 19 miles, 4.9% decrease over 2011

Off-Peak Day: 5 miles, 21.5% increase over 2011

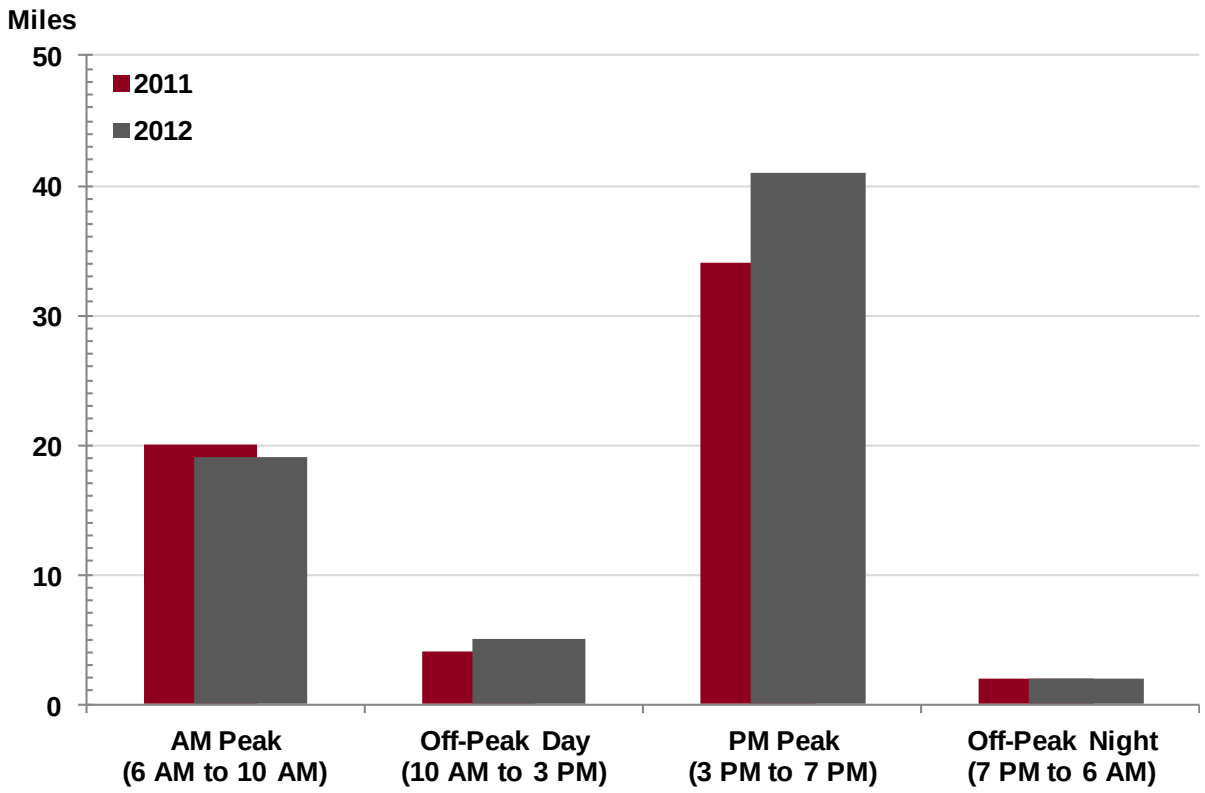
PM Peak: 41 miles, 18.2% increase over 2011

Off-Peak Night: 2 miles, 12.2% decrease over 2011

Lost Lane Miles at 35 miles per hour

FIGURE 12

AVERAGE NON-HOLIDAY WEEKDAY EQUIVALENT LOST LANE MILES

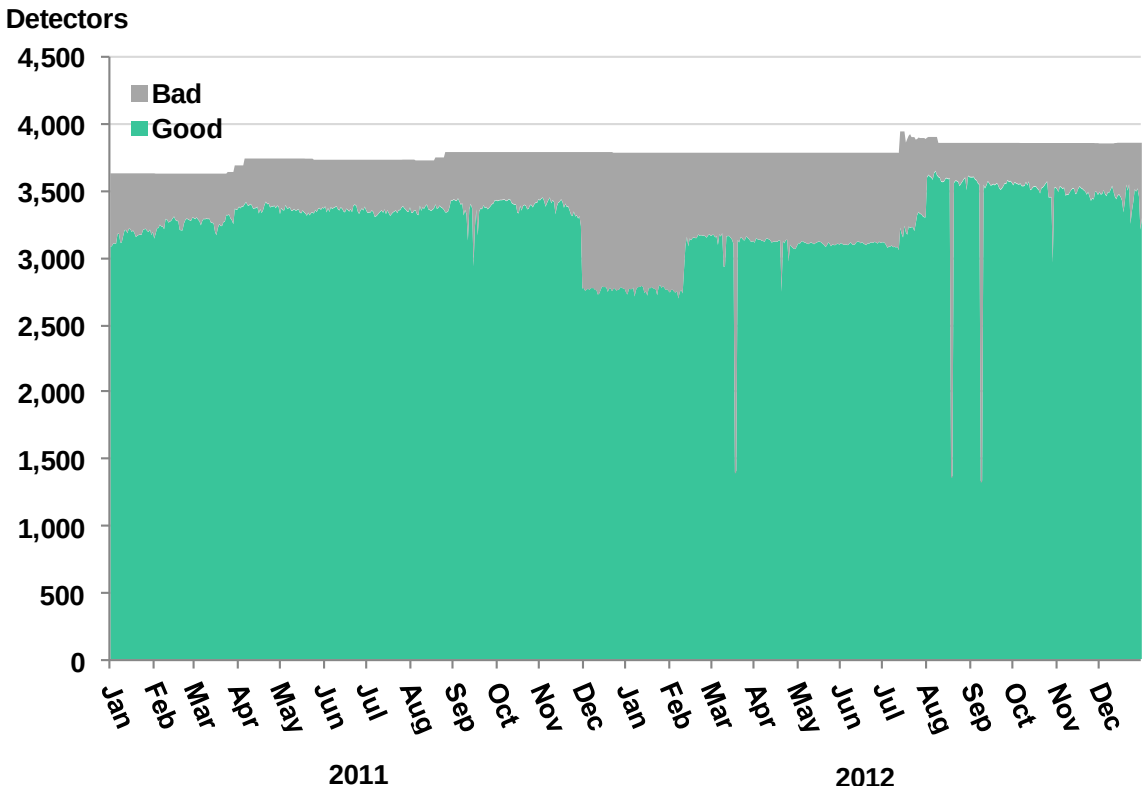


5. DETECTOR HEALTH AND DATA QUALITY

Directional Mainline Miles:	2,058 miles
Directional Mainline Miles with Detection:	550 miles
Number of Detectors at End of 2012:	3,852, 2% increase over 2011
Average Percentage of Good and Bad Detection:	84% good, 2.1% decrease over 2011; 16% bad, 37% increase over 2011
Number of Days Reporting less Than 50% Working Detection:	6

FIGURE 13

DETECTOR HEALTH BY DAY, 2011-2012



6. FREEWAY CONGESTION AND BOTTLENECK LOCATIONS

6.1. Congestion by Freeway

Congestion Contributed by Top Congested Freeways: 12,821,619 hours,
98.7% of total VHD in 2012

Table 3. TOP CONGESTED FREEWAYS, 2011-2012

Route	County	Vehicle Hours of Delay at 60 mph		Difference (2012 - 2011)		Rank	
		2011	2012	Absolute	Percent	2011	2012
I–5	San Diego	3,920,871	4,277,566	356,695	9%	1	1
I–15	San Diego	2,013,483	2,165,599	152,116	8%	2	2
I–805	San Diego	1,659,154	2,039,394	380,240	23%	3	3
SR–163	San Diego	1,259,653	1,239,135	-20,518	-2%	4	4
SR–78	San Diego	1,021,650	1,209,023	187,373	18%	5	5
I–8	San Diego	540,344	644,464	104,120	19%	6	6
SR–52	San Diego	370,371	455,047	84,675	23%	7	7
SR–56	San Diego	229,686	329,443	99,757	43%	8	8
SR–94	San Diego	204,937	234,445	29,508	14%	9	9
SR–67	San Diego	0	227,505	227,505			10
TOTALS		**11,220,150**	**12,821,619**	**1,601,469**	**14.3%**		

6.2. Bottleneck Locations

Total Delay, All AM Bottlenecks: 881,658 hours
Top Bottleneck Delay, AM: 726,823 hours
Percentage Top Bottleneck Delay of Total Bottleneck Delay, AM: 82%

Table 4 (A). TOP BOTTLENECKS, AM PEAK PERIOD

Rank	County	City	Freeway	CA Postmile	Approximate Location	Average Extent (miles)	Total Delay (hours)	Average Daily Delay (hours)	Average Duration (hours)	Percent of Days Active
1	San Diego	San Diego	I805–N	22.458	Eastbound Clairemont Mesa Blvd	2.50	230,837	986	2.1	93%
2	San Diego	Encinitas	I5–S	R39.201	North of Vista View	5.90	145,440	915	0.6	63%
3	San Diego	San Diego	SR163–S	2.49	Robinson Ave	2.23	76,440	490	2.6	62%
4	San Diego	National City	I5–N	R11.282	North of 8th St	2.61	53,640	290	0.7	74%
5	San Diego	San Diego	I805–N	16.08	North of University Ave	1.59	50,966	335	1.2	61%
6	San Diego	San Diego	SR94–W	1.571	F St at I–5	1.46	48,555	322	0.9	60%
7	San Diego	San Diego	I15–N	R6.67	South of Friars Rd	1.03	46,332	233	1.3	79%
8	San Diego	Carlsbad	I5–N	R50.451	South of Las Flores Dr	0.70	29,625	312	4.8	38%
9	San Diego	La Mesa	I8–W	10.517	Westbound Fletcher Pkwy	1.38	23,188	162	0.7	57%
10	San Diego	Escondido	I15–S	R28.621	Citricado Pkwy	2.18	21,800	295	0.9	29%

Total Delay, All PM Bottlenecks: 2,944,351 hours
Top Bottleneck Delay, PM: 1,662,726 hours
Percentage Top Bottleneck Delay of Total Bottleneck Delay, PM: 56%

Table 4 (B). TOP BOTTLENECKS, PM PEAK PERIOD

Rank	County	City	Freeway	CA Postmile	Approximate Location	Average Extent (miles)	Total Delay (hours)	Average Daily Delay (hours)	Average Duration (hours)	Percent of Days Active
1	San Diego	San Marcos	SR78–E	14.86	Barham Dr	4.45	436,261	1,795	3.3	97%
2	San Diego	San Diego	I805–S	25.249	Nobel Dr	3.04	318,443	1,305	3.1	97%
3	San Diego	San Diego	I5–N	R37.37	Lomas Santa Fe Dr Eastbound	4.29	170,617	836	1.5	81%
4	San Diego	San Diego	SR56–E	1.89	Carmel Country Rd	2.24	151,588	645	2.1	94%
5	San Diego	San Diego	SR163–S	2.49	Robinson Ave	2.38	125,193	696	3.3	72%
6	San Diego	San Diego	I5–S	R25.848	La Jolla Pkwy/SR–52	3.86	105,263	602	1.2	70%
7	San Diego	San Diego	SR52–E	10.05	East of Santo Rd	2.49	104,575	461	1.9	90%
8	San Diego	San Diego	I15–S	R9.196	Westbound SR–274/Balboa Ave	1.74	92,994	408	1.6	91%
9	San Diego	San Diego	I5–S	R27.903	Nobel Dr	2.47	83,843	401	1.2	83%
10	San Diego	Carlsbad	I5–N	R50.451	South of Las Flores Dr	0.71	73,950	456	4.4	65%

FIGURE 14 (A)

BOTTLENECKS AND CONGESTED SEGMENTS, AM PEAK PERIOD

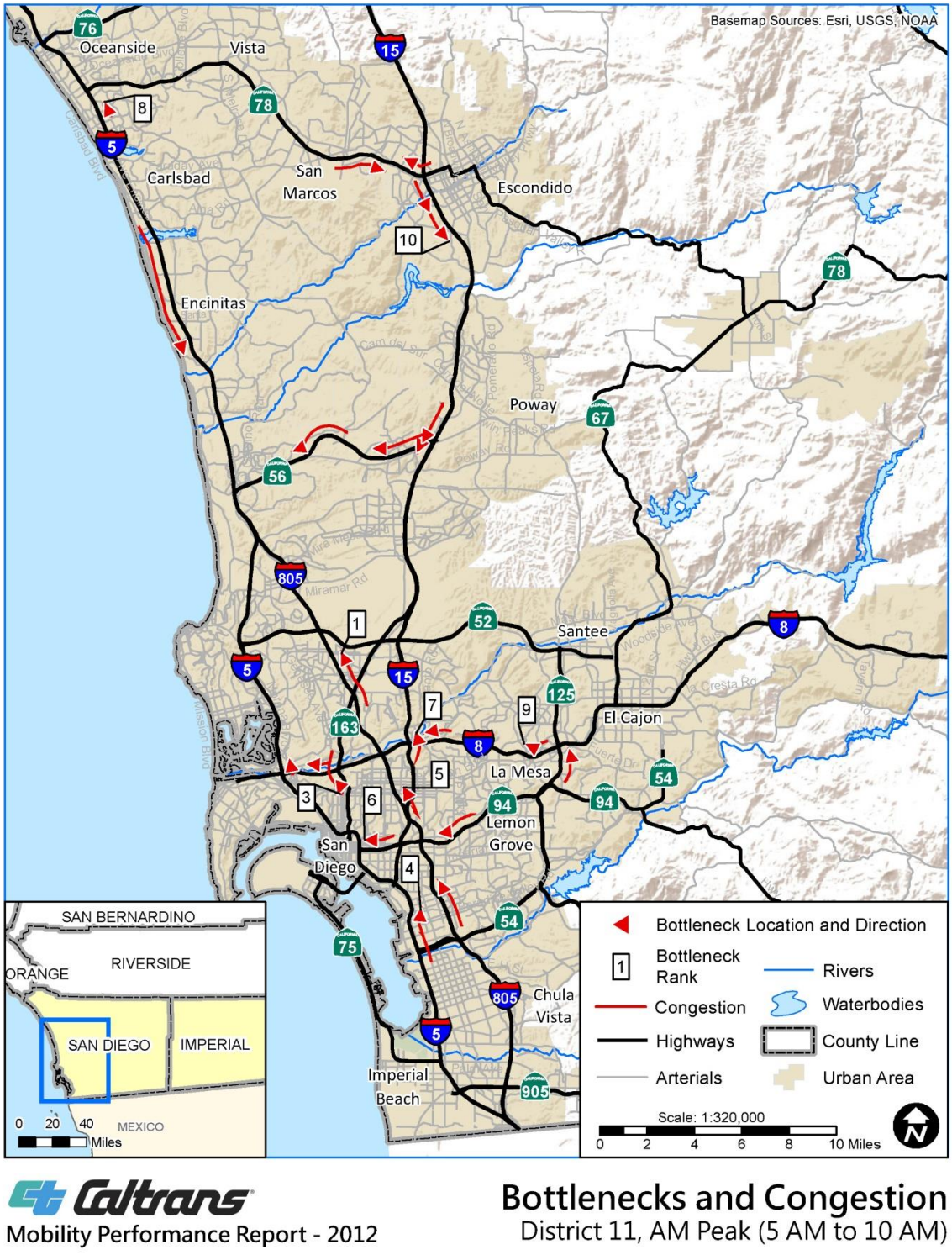


FIGURE 14 (B)

BOTTLENECKS AND CONGESTED SEGMENTS, PM PEAK PERIOD